

## Scientific Note

### ***HARMONIA AXYRIDIS* (PALLAS) (COLEOPTERA: COCCINELLIDAE), FIRST WESTERN UNITED STATES RECORD FOR THIS ASIATIC LADY BEETLE**

*Harmonia axyridis* (Pallas) is a predator of aphids and scale insects and is distributed from Siberia through China and Japan. It was introduced into California in 1916, 1964, and 1965, and into Nova Scotia, ten eastern states, from Maine to Mississippi and Washington, from 1978 to 1985 (Gordon, R. D. 1985. J. New York Entomol. Soc. 93: 1–912; Chapin, J. B. & V. A. Brou. 1991. Proc. Entomol. Soc. Wash. 93: 630–635). No recoveries were reported until those of Chapin & Brou (1991) during 1988–1990 in Louisiana and Mississippi, and in Georgia in 1991 (Gordon, R. D. & N. Vandenberg. 1991. Proc. Entomol. Soc. Wash. 93: 845–846).

In June, 1993, one of us (SHD) collected lady beetles that KSH later identified as *Harmonia axyridis*. At least four adults and two pupae were collected by hand from an aphid-infested elm tree, probably *Ulmus americana* L., in Vancouver, Washington. Other uncollected specimens of apparently the same species were observed on an ornamental *Pyrus* species about 1 km away in Vancouver. Two *H. axyridis* were also collected on a *Quercus* sp., about 13 km from the first site, in Portland, Oregon. Jeffrey C. Miller and Michael LaMana (personal communication), Oregon State University, Corvallis, first discovered *H. axyridis* at sites in northwestern Oregon during the spring of 1993.

Since April, 1993, Kent M. Daane and KSH have been introducing into California, *Harmonia axyridis* received from W. L. Tedders at the University of Georgia. Releases were on pecan, *Carya illinoensis* Koch, infested with yellow pecan aphid, *Monelliopsis pecanis* (Bissell). Release dates (and number of adults released) during 1993 were 9 Apr (1400), 26 Apr (700), and 15 May (1400) in Visalia (Tulare Co.) and 26 Apr (20) in Clovis (Fresno Co.), California. In May, 1994, LGB collected two adults of *H. axyridis* from fennel, *Foeniculum vulgare* Miller, outside of a greenhouse near downtown Sacramento (Sacramento Co.), California. These beetles, along with *Hippodamia convergens* Guerin, were feeding on aphids. In October, 1994, larvae, pupae, and adults were abundant on cotton, *Gossypium hirsutum* L., at the same location. In September, 1994, SHD collected one adult *H. axyridis* from a potted chrysanthemum, *Dendranthema grandiflora* (Tzvelev), infested with melon aphids, *Aphis gossypii* Glover, in Davis (Yolo Co.), California. During April and May, 1995, *H. axyridis* appeared to be common in the Davis and Sacramento area; it was observed on aphid-infested *Liriodendron*, *Lycopersicon*, *Prunus*, *Quercus*, *Rosa* and *Ulmus* sp.

In addition to its apparent economic importance as a biological control agent, *Harmonia axyridis* is of evolutionary interest because of its color variability (Ayala, F. J. 1978. Scient. Amer., 239: 56–69); more than 100 forms of the beetle have reportedly been described. The lady beetles we collected in Oregon and

Washington have light orange elytra with 19 black spots. They have been designated *H. axyridis* var. *19-signata* and are most prevalent in southern Siberia and southwestern China (Dobzhansky, Th. 1933. Amer. Nat., 67: 97–126). Specimens collected in California include individuals with pale yellow to light orange elytra and little or no dark markings, in addition to the *19-signata* pattern. All specimens exhibited the transverse subapical elytral ridge characteristic of this species.

*Material Examined.*—CALIFORNIA. SACRAMENTO Co.: Sacramento, North B Street, 17 May 1994, *Foeniculum vulgare*, L. G. Bezark. Sacramento, North B Street, 3 Oct 1994, *Gossypium hirsutum*, L. G. Bezark & J. Brown. YOLO Co.: Davis, Orchard Park Drive, 29 Sep 1994, *Dendranthema grandiflora*, S. H. Dreistadt. OREGON. MULTNOMAH Co.: Portland, Hoyt Arboretum, *Quercus* sp., S. H. Dreistadt. WASHINGTON. CLARK Co.: Fort Vancouver Historical Site, Vancouver, 28 Jun 1993, (prob.) *Ulmus americana* L.

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